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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/975,258	10/12/2001	Robert C. Corcoran	08446.0002	8853

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EXAMINER
THERKORN, ERNEST G

ART UNIT	PAPER NUMBER
1723	9

DATE MAILED: 05/27/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.	Applicant(s)
09/975,258	CORCORAN
Examiner	**Art Unit**
THERKORN	1723

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on May 14, 2003.

2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) 79-140 is/are pending in the application.

4a) Of the above, claim(s) 82-86, 92, 95-98, 100, 102, 110-113, 117-120, and 124-127, and 129-140 is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) 79-81, 87-91, 93, 94, 99, 101, 103-109, 114-116, 121-123, and 128 is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are a) ☐ accepted or b) ☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) ☐ All b) ☐ Some* c) ☐ None of:

1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

*See the attached detailed Office action for a list of the certified copies not received.

14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

a) ☐ The translation of the foreign language provisional application has been received.

15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s). 4+6
4) ☐ Interview Summary (PTO-413) Paper No(s). _____
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other:

Claims 79, 80, 87-91, 93-94, 99, 101, 103-109, 114-116, and 121-123 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. No support can be found for "without the addition of a reagent acting at the covalent bond." As such, the claims are considered to be drawn to new matter.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless -
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 79, 80, 87-91, 93-94, 106-107, 114, and 121-122 are rejected under 35 U.S.C. 102(B) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Hylarides (U.S. Patent No. 5,141,648). The claims are considered to read on Hylarides (U.S. Patent No. 5,141,648). However, if a difference exists between the claims and Hylarides (U.S. Patent No. 5,141,648), it would reside in optimizing the steps of Hylarides (U.S. Patent No. 5,141,648). It

would have been obvious to optimize the steps of Hylarides (U.S. Patent No. 5,141,648) to enhance separation.

Claims 81, 123, and 128 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hylarides (U.S. Patent No. 5,141,648) in view of either Schossler (U.S. Patent No. 4,822,681) or Carron (WO 98/59234) and Sohar (U.S. Patent No. 3,894,026). At best, the claims differ from Hylarides (U.S. Patent No. 5,141,648) in reciting use of a nitroso group and targeting a 1,3-diene group. Schossler (U.S. Patent No. 4,822,681) (column 3, lines 3-22) discloses that a nitroso group is interchangeable with Hylarides (U.S. Patent No. 5,141,648)'s column 32, lines 60-63 amino, sulfhydryl, and carbonyl groups. Carron (WO 98/59234) (page 27, lines 1-8 and page 59, line 30-page 60, lines 3) discloses that a nitroso group is interchangeable with Hylarides (U.S. Patent No. 5,141,648)'s column 32, lines 60-63 carbonyl groups as a reactive functional group. Sohar (U.S. Patent No. 3,894,026) (column 4, lines 25-28 and 55-57) discloses thebaine, a compound containing a 1,3-diene group, is chromatographed to purify it. It would have been obvious to use a nitroso group and target a 1,3-diene group either because Schossler (U.S. Patent No. 4,822,681) (column 3, lines 3-22) discloses that a nitroso group is interchangeable with Hylarides (U.S. Patent No. 5,141,648)'s column 32, lines 60-63 amino, sulfhydryl, and carbonyl groups or because Carron (WO 98/59234) (page 27, lines 1-8 and page 59, line 30-page 60, lines 3) discloses that a nitroso group is interchangeable with Hylarides (U.S. Patent No. 5,141,648)'s column 32, lines 60-63 carbonyl groups as a reactive functional group and because Sohar (U.S.

Patent No. 3,894,026) (column 4, lines 25-28 and 55-57) discloses thebaine, a compound containing a 1,3-diene group, is chromatographed to purify it.

Claim 91 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hylarides (U.S. Patent No. 5,141,648) in view of Stevens (U.S. Patent No. 4,927,539) and Schossler (U.S. Patent No. 4,822,681). At best, the claim differs from Hylarides (U.S. Patent No. 5,141,648) in reciting use of a macroreticular polymer. Stevens (U.S. Patent No. 4,927,539) (column 2, lines 24-27) discloses that a macroporous polymer has higher capacity. Schossler (U.S. Patent No. 4,822,681) (column 8, line 40) discloses that reactive supports are conventionally macroporous. It would have been obvious to use a macroreticular polymer in Hylarides (U.S. Patent No. 5,141,648) because Stevens (U.S. Patent No. 4,927,539) (column 2, lines 24-27) discloses that a macroporous polymer has higher capacity and because Schossler (U.S. Patent No. 4,822,681) (column 8, line 40) discloses that reactive supports are conventionally macroporous.

Claims 99, 101, and 103-105 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hylarides (U.S. Patent No. 5,141,648) in view of either Carron (WO 98/59234) or Duran (WO 99/16907). At best, the claims differ from Hylarides (U.S. Patent No. 5,141,648) in reciting use of a reactivity modifier group. Carron (WO 98/59234) (page 30, lines 9-30) discloses modifiers such as amines influence the reactivity between the reactive functional group and the analyte. Duran (WO 99/16907) (page 6, lines 9-12 and page 7, lines 22-23) discloses ionic compounds such as amines attract target molecules. It would have been obvious to use a modifier in Hylarides (U.S. Patent No. 5,141,648) either because Carron (WO 98/59234) (page 30, lines 9-

30) discloses modifiers such as amines influence the reactivity between the reactive functional group and the analyte or because Duran (WO 99/16907) (page 6, lines 9-12 and page 7, lines 22-23) discloses ionic compounds such as amines attract target molecules.

Claims 108 and 109 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hylarides (U.S. Patent No. 5,141,648) in view of either Schossler (U.S. Patent No. 4,822,681) or Carron (WO 98/59234). At best, the claims differ from Hylarides (U.S. Patent No. 5,141,648) in reciting use of a nitroso group. Schossler (U.S. Patent No. 4,822,681) (column 3, lines 3-22) discloses that a nitroso group is interchangeable with Hylarides (U.S. Patent No. 5,141,648)'s column 32, lines 60-63 amino, sulfhydryl, and carbonyl groups. Carron (WO 98/59234) (page 27, lines 1-8 and page 59, line 30-page 60, lines 3) discloses that a nitroso group is interchangeable with Hylarides (U.S. Patent No. 5,141,648)'s column 32, lines 60-63 carbonyl groups as a reactive functional group. It would have been obvious to use a nitroso group either because Schossler (U.S. Patent No. 4,822,681) (column 3, lines 3-22) discloses that a nitroso group is interchangeable with Hylarides (U.S. Patent No. 5,141,648)'s column 32, lines 60-63 amino, sulfhydryl, and carbonyl groups or because Carron (WO 98/59234) (page 27, lines 1-8 and page 59, line 30-page 60, lines 3) discloses that a nitroso group is interchangeable with Hylarides (U.S. Patent No. 5,141,648)'s column 32, lines 60-63 carbonyl groups as a reactive functional group.

Claims 115, 116, and 122 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hylarides (U.S. Patent No. 5,141,648) in view of Kohn (U.S. Patent No. 6,362,008). At best, the claims differ from Hylarides (U.S. Patent No. 5,141,648) in reciting use of methanol as an eluent.

Kohn (U.S. Patent No. 6,362,008) (column 7, lines 59-62 and 16-25) discloses that use of methanol is a known releasing agent for covalent chromatography. It would have been obvious to use methanol in Hylarides (U.S. Patent No. 5,141,648) because Kohn (U.S. Patent No. 6,362,008) (column 7, lines 59-62 and 16-25) discloses that use of methanol is a known releasing agent for covalent chromatography.

Claims 79, 80, 87-91, 93-94, 106-107, 114-116, and 121-122 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hylarides (U.S. Patent No. 5,141,648) in view of Kohn (U.S. Patent No. 6,362,008). At best, the claims differ from Hylarides (U.S. Patent No. 5,141,648) in reciting use of methanol as an eluent. Kohn (U.S. Patent No. 6,362,008) (column 7, lines 59-62 and 16-25) discloses that use of methanol is a known releasing agent for covalent chromatography. It would have been obvious to use methanol in Hylarides (U.S. Patent No. 5,141,648) because Kohn (U.S. Patent No. 6,362,008) (column 7, lines 59-62 and 16-25) discloses that use of methanol is a known releasing agent for covalent chromatography.

Claims 81, 123, and 128 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hylarides (U.S. Patent No. 5,141,648) in view of Kohn (U.S. Patent No. 6,362,008) as applied to claims 79, 80, 87-91, 93-94, 106-107, 114-116, and 121-122 above, and further in view of either Schossler (U.S. Patent No. 4,822,681) or Carron (WO 98/59234) and Sohar (U.S. Patent No. 3,894,026). At best, the claims differ from Hylarides (U.S. Patent No. 5,141,648) in view of Kohn (U.S. Patent No. 6,362,008) in reciting use of a nitroso group and targeting a 1,3-diene group. Schossler (U.S. Patent No. 4,822,681) (column 3, lines 3-22) discloses that a nitroso

group is interchangeable with Hylarides (U.S. Patent No. 5,141,648)'s column 32, lines 60-63 amino, sulfhydryl, and carbonyl groups. Carron (WO 98/59234) (page 27, lines 1-8 and page 59, line 30-page 60, lines 3) discloses that a nitroso group is interchangeable with Hylarides (U.S. Patent No. 5,141,648)'s column 32, lines 60-63 carbonyl groups as a reactive functional group. Sohar (U.S. Patent No. 3,894,026) (column 4, lines 25-28 and 55-57) discloses thebaine, a compound containing a 1,3-diene group, is chromatographed to purify it. It would have been obvious to use a nitroso group and target a 1,3-diene group in Hylarides (U.S. Patent No. 5,141,648) in view of Kohn (U.S. Patent No. 6,362,008) either because Schossler (U.S. Patent No. 4,822,681) (column 3, lines 3-22) discloses that a nitroso group is interchangeable with Hylarides (U.S. Patent No. 5,141,648)'s column 32, lines 60-63 amino, sulfhydryl, and carbonyl groups or because Carron (WO 98/59234) (page 27, lines 1-8 and page 59, line 30-page 60, lines 3) discloses that a nitroso group is interchangeable with Hylarides (U.S. Patent No. 5,141,648)'s column 32, lines 60-63 carbonyl groups as a reactive functional group and because Sohar (U.S. Patent No. 3,894,026) (column 4, lines 25-28 and 55-57) discloses thebaine, a compound containing a 1,3-diene group, is chromatographed to purify it.

Claim 91 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hylarides (U.S. Patent No. 5,141,648) in view of Kohn (U.S. Patent No. 6,362,008) as applied to claims 79, 80, 87-91, 93-94, 106-107, 114-116, and 121-122 above, and further in view of Stevens (U.S. Patent No. 4,927,539) and Schossler (U.S. Patent No. 4,822,681). At best, the claim differs from Hylarides (U.S. Patent No. 5,141,648) in view of Kohn (U.S. Patent No. 6,362,008) in reciting

use of a macroreticular polymer. Stevens (U.S. Patent No. 4,927,539) (column 2, lines 24-27) discloses that a macroporous polymer has higher capacity. Schossler (U.S. Patent No. 4,822,681) (column 8, line 40) discloses that reactive supports are conventionally macroporous. It would have been obvious to use a macroreticular polymer in Hylarides (U.S. Patent No. 5,141,648) in view of Kohn (U.S. Patent No. 6,362,008) because Stevens (U.S. Patent No. 4,927,539) (column 2, lines 24-27) discloses that a macroporous polymer has higher capacity and because Schossler (U.S. Patent No. 4,822,681) (column 8, line 40) discloses that reactive supports are conventionally macroporous.

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99/16907) (page 6, lines 9-12 and page 7, lines 22-23) discloses ionic compounds such as amines attract target molecules.

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The restriction and election of species requirements have been reconsidered, deemed

proper, and made final for the reasons of record.

Any inquiry concerning this communication should be directed to E. Therkorn at telephone number (703) 308-0362.

Ernest G. Therkorn

Ernest G. Therkorn
Primary Examiner
Art Unit 1723

EGT/12
May 21, 2003